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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,822	10/23/2003	Leonardo E. Blanco	4090	1433

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EXAMINER	
HAJNIK, DANIEL F	

ART UNIT	PAPER NUMBER
2671	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/693,822	BLANCO ET AL.	
	Examiner	Art Unit	
	Daniel F. Hajnik	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2, 4, 9-20, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milne (US Patent 5553222, herein referred to as "Milne").

As per claim 1, Milne teaches the claimed first and second component in figure 10 where Player A is the first component and Player B is the second component (also see figure 5 where it is shows their respective clocks). In this reference, the components are considered to be clocks that run separate multi-media functions such as movies, animation, or music (col 9, lines 8-9). Further, in this reference, Player B (second component) is running at a faster tick rate than Player A (first component), which is running at a slower tick rate (fig 5). Each multi-media player has an associated, respective clock (i.e. see figure 10).

Milne teaches the claimed interval generation mechanism in figure 2 where a computer clock is shown and where the interval data generated by this clock is received by Player A (first component) and Player B (second component) in figure 5 for timing.

Milne does not specifically teach the claimed "current time data". However, given that in figure 3 there is a 'Time Source' which has 'System Timer' data feeding into the

clock, it would have been obvious to one of ordinary skill in the art at the time of invention to use the current time data. The advantage to do so is that the system timer would have more accurately up-to-date time information and have additional capabilities to perform real-time operations that required current time data.

As per claim 18, the reasons and rationale for the rejection of claim 1 are incorporated herein. Milne shows the claimed "receiving clock data" in figure 3 where a clock receives clock data from the system timer. Milne in figure 14 shows the claimed "causing output to be produced" by showing an audio player and video player (also see figure 28).

As per claim 26, the reasons and rationale for the rejection of claim 18 are incorporated herein. Milne teaches in figure 1 the claimed "computer-readable medium" in piece 14, labeled 'RAM" and teaches the claimed "computer-executable instructions" in piece 10, labeled 'CPU' where instructions are the reasons and rationale for the rejection of claim 1 is incorporated herein.

As per claim 2, Milne teaches the claimed animated characteristic in figure 28 where it shows images (animated characteristic).

As per claim 4, Milne teaches the claimed limitation in figure 5 where clock B (second component) is going faster (an thus faster outputting) relative to clock A (first component).

As per claim 9, Milne teaches the claimed limitations by stating "A time-based media sequence ... MIDI ... It starts at time 0 and has a duration" (col 8, lines 63-67) where the MIDI sequence is associated with a clock and thus shares these properties with the clock (col 9, lines 7-10 and 20-23).

As per claim 10, Milne teaches the claimed limitation in figure 5 where clock A is shown to have a repeat count of 2 where the repeat count indicates that clock B ticks at least twice as often as clock A. For example, clock A waits for clock B to be repeated twice before adding a unit of time to its count.

As per claim 11, Milne teaches the claimed limitations by stating "Clocks can travel backwards in time" (col 7, lines 28).

As per claims 12 and 13, Milne teaches the claimed limitations by teaching of basing a moving playback position (which is the equivalent of a play head on a tape recorder) according to a clock rate (col 9, lines 12-16). Milne teaches of slowing down and speeding up a clock such as a master clock (col 9, lines 30-33) where this slowing down and speeding up would have to have an associated de-acceleration or

acceleration. Milne teaches of manipulating more than one clock speed as well through multiple audio and video sequences (col 9, lines 51-60).

As per claim 14, Milne teaches the claimed limitation by teaching of "A non-driven time source knows how to find its current time, and it has a member function, GetNextTime(), that returns the next time that an alarm or delay should be fired" (col 12, lines 57-60) where this process of finding the next time an alarm or delay should be fired is a seek instruction because it is seeking out the next time an associated event should fire.

As per claim 15, Milne teaches the claimed limitation by teaching of a clock rate (speed data) by stating "a is a floating point value that determines the rate of the slave clock's current time relative to the master clock's current time)" (col 8, lines 25-27).

As per claim 16, Milne teaches the claimed limitation by teaching of "A software clock, an illustration of which appears in FIG. 2, is an object that performs the following functions ... Member functions are provided for setting and getting the current time." (col 7, lines 24-25 and lines 29-30).

As per claim 17, Milne teaches the claimed limitation by teaching of associating different clocks (and thus their associated players which are components) with a unique thread by teaching of blocking/unblocking threads. Milne states "A clock can block a

thread until a certain time, called the delay time, is reached. If the clock is going forward, the thread is unblocked when the clock's current time is equal to or greater than the delay time" (col 7, lines 35-39). Here, the reference teaches of animation or audio sequence executing on a different threads, i.e. where in figure 10 sequence Player B is the second component and sequence Player A is the first component. Figure 10 further shows that these components have associated clocks.

As per claims 19 and 20, Milne teaches the claimed limitations in figure 8 where the play position is the progress value and where an interval can be considered the time length of a given interval of the shown sequence. One example of output is shown in figure 28 where the animation property (animation image) varies as the current time varies.

As per claim 25, Milne does not explicitly teach the claimed limitation. However, Milne does suggest this limitation by stating "Normally, a clock's time advances in real-time based upon a system timer. The system timer is represented by a time source object 300 in FIG. 3. However, a clock can also be synchronized to another time source, such as Society of Motion Picture and Television Engineers (SMPTE) Time Code entering the computer from a video tape recorder (VTR) as illustrated in FIG. 4. The clock's current time will follow the timecode coming in from the VTR" (col 7, lines 51-59). By teaching of real-time based or Motion Picture and television based time data, it would have been obvious to set the rate at the refresh rate of the system in order to

optimally use the computing resources efficiently while not wasting resources on trying to update the system faster than the refresh rate can handle.

3. Claims 3, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milne in view of Cheng et al. (US Patent 6731314, herein referred to as "Cheng").

As per claim 3, Milne does not teach the claimed limitations. Cheng teaches the claimed interpolating a current progress value for the animated characteristic by stating "A technique for efficiently authoring and storing information about an object with respect to time ... This technique only stores the information about an object's properties at specific times, known as key frames. When the animation is played back, times between key frames are interpolated to give the appearance of smooth animation" (col 23, line 61 – col 24, line 2). It would have been obvious to one of ordinary skill in the art at the time of invention to combine Cheng with Milne. Cheng provides one advantage by teaching of achieving smooth animation by interpolating (col 23, line 67 – col 24, line 2).

As per claim 27, the reasons and rationale for the rejection of claim 3 is incorporated herein. Milne teaches the claimed first field, second field, third field, fourth field by stating "A time-based media sequence is an abstract base class that can be used to represent a clip of audio, video, animation, or Musical Instrument Digital Interface (MIDI) data, or any other data that varies over time. It starts at time 0 and has a duration represented by a time object. FIG. 7 is an example of a time based sequence that is three seconds in duration." (col 8, line 63 – col 9, line1). Figure 8 shows the

starting time (first field), the play position (second field), the ending time (third field), and fourth field would be contained within the shown 'Time-Based Media Sequence'. Milne does not teach the claimed "interpolate a progress value". Please refer to the rejection of claim 3 for the reasons for rejection of this limitation and the reasons to combine references.

As per claim 28, Milne teaches the claimed limitation by showing an iteration in figure 2 where the clock has an iteration of relating mathematically to picoseconds (also see col 7, line 27-29).

4. Claims 5-8 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milne in view of Anderson.

As per claim 5, Milne does not teach the claimed limitations. Anderson teaches the claimed "event list" in figure 19 (also see col 28, lines 5-12). Further, the event list in figure 19 indicates an 'ET' (elapsed time) field (event list based on clock data). It would have been obvious to one of ordinary skill in the art at the time of invention to combine Anderson with Milne. Milne teaches one advantage of the combination by teaching of coordinating (synchronizing) multiple animation sequences with associated clock objects (col 1, line 65 – col 2, line 3).

As per claim 6, Milne does not teach the claimed limitations. Anderson teaches adding an interactive event into the list (see differences between figures 16 and 19) where the event list in figure 19 has added interactive events.

As per claim 7, Milne does not teach the claimed limitations. Anderson teaches the claimed implicit event by teaching of an event of checking whether an object has motion and if so then identifying a plurality of nodes along the animation path (re-computing animation) (col 3, line 66 – col 4, line 2).

As per claim 8, Milne does not teach the claimed limitations. Anderson teaches the claimed limitations by teaching of marking an event as unused if the object has no motion (col 4, lines 2-4) (thus is unused in the event list since it has no associated nodes along the animation path for movement).

As per claims 21-24, the claimed limitations are similar to those of claims 5-8, respectively, in terms of functionality and thus are subject to the same reasons for rejection.

5. Claims 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US Patent 5986675, herein referred to as "Anderson").

As per claim 29, Anderson teaches the claimed "event list" in figure 19 (also see col 28, lines 5-12).

Anderson does not explicitly teach the claimed "interval list". However, Anderson in figure 18 indicates an interval sequence on a path for given node numbers. Further event list in figure 19 indicates an 'ET' (elapsed time) field which are associated with intervals. Given these teachings it would have been obvious to one of ordinary skill in the art to perform the claimed limitations. One advantage to putting these intervals of figure 18 into a list structure is that a list is one most basic ways of organizing computer

data in memory and would be one of the simplest organization schemes to design and use.

Anderson teaches the claimed "determining a current interval", and the claimed "output" in figure 18 where arrows are used to show a current interval in a given interval sequence. Further, Anderson teaches of a 3D animated movie (output) (see abstract).

6. Claims 30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Milne.

As per claim 30, the reasons and rationale for the rejection of claim 5 are incorporated herein. Anderson does not explicitly teach the claimed limitations. Milne teaches the claimed limitation in figure 32, step 3220, labeled 'Get Clock Time'. Please refer to the rejection of claim 5 for the reasons to combine the references.

As per claim 31, Anderson does not explicitly teach the claimed limitations. Milne teaches of a dependent clock receiving properties from another clock (i.e. an independent clock) in figure 15. If the event list was based upon a dependent clock the event list would also be dependent upon the independent clock.

As per claim 32, the reasons and rationale for the rejection of claim 7 are incorporated herein. Anderson teaches the claimed inactive state transitions by teaching of having the system have a character move to a given area whether the character walks to the location or runs to the location (col 28, lines 14-20) (transition to

a point or node). This functionality would require the computer to take the transitions of events into account in order to determine the proper animation sequence.

As per claims 33 and 34, Anderson does not explicitly teach the claimed limitations. However, Anderson in figure 17 shows a 'Record new path' in step 1730, and an 'End record' in step 1720 which are associated with adding events into the event list and associated with editing the event list. Given that the system would need to track when the recording starts and ends, it would have been obvious to include implicit events to mark these actions. One advantage of these implicit events is to better determine a time order of the user's interactive actions editing events (col 28, lines 5-12 and 15-16).

As per claim 35, the limitations of this claim are incorporated into claim 8, and thus are subject to the same reasons of rejection.

As per claim 36, the limitations of this claim are incorporated into claims 26 and 29, and thus are subject to the same reasons of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see form 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel F. Hajnik whose telephone number is (571) 272-7642. The examiner can normally be reached on Mon-Fri (8:30A-5:00P).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka J. Chauhan can be reached on (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/10/2005

DFH

ULKA J. CHAUHAN
PRIMARY EXAMINER